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Abstract. [Translation.]

THE VAGINAL TOTAL EXTIRPATION OF THE UTERUS FOR CANCER.

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Ten years ago A. W. Freund inaugurated the extirpation of the cancerous uterus; it may be supposed that sufficient material is at hand to decide the two following questions, which may legitimately be asked concerning every new method of surgical treatment:

1st. Is this operation practicable with such immediate success that it promises good results in the hands of others than a few specially successful operators?

2d. Does the extirpation of the cancerous uterus give permanent results which force us to recognize that this method is superior to any other treatment of cancer employed up to the present time?

In seeking an answer to the first question, if we examine the literature, we are struck with the fact that so meagre and isolated reports about this operation can be found in the journals of English and German medical literature. The fact must be recognized that the vaginal extirpation has obtained decided recognition in Germany. Here the purely vaginal operation of Czerny and Billroth and Schröder has been adopted in place of the procedure of Freund, which was a combination of abdominal and vaginal operation. The results of the same have improved in a very noticeable manner with increasing exercise and experience.

In 1881 Olshausen collected 41 cases with 29 % mortality.
" 1883 Sänger " 133 " 28 % "
" 1884 Engström " 157 " 29 % "
" 1886 Hegar " 257 " 23 % "

Through the courtesy and kindness of these operators, who, to my knowledge, commanded the greatest amount of material, and who, at my request, placed at my disposal the results up to the end of the year 1886, I am able to construct the following table:

TABLE I.

Up to the end of 1886 the following total extirpations have been performed on account of carcinoma uteri:

Fritsch	60	times with	7	deaths.
Leopold	42	"	4	"
Olshausen	47	"	12	"
Schröder [Hofmeier]	74	"	12	"
Staude	22	"	1	"
A. Martin	66	"	11	"
Total	311	cases with	47	"
		Or 15.1 %		

The total result accordingly shows of vaginal total extirpation on account of cancer of the uterus in 311 cases 15.1 per cent. mortality; and are we not justified in assuming that this percentage of mortality will diminish with increasing experience, as shown by the improvement which may be easily seen in the published tabular results of each of these operators? Already, to date, the total extirpation of the uterus on account of cancer shows better results so far as immediate mortality is concerned than operation for removal of the breast for cancer.

For the latter, Küster, at the twelfth meeting of the German Surgical Society, in 1883, published 778 cases, with a

mortality of 15.6 per cent. and who would hesitate to propose to perform the amputatation of the cancerous breast as soon as the diagnosis is established?

I do not hesitate to answer my first question in the affirmative, and to claim for this operation of the vaginal total extirpation of the cancerous uterus a full and equal rank among all the methods for the treatment of cancer of this organ.

For the answer to the second question we will make use of the relatively small but very accurately reported cases of Schröder, collected by Hofmeier, and those of Fritsch, Leopold, and myself.

These cases are brought together in the following table:

TABLE II.—*Permanent Results.*

TOTAL EXTIRPATION ON ACCOUNT OF CANCER.

Operator.	Number of cases.	OF THESE WE REJECT—					Remaining number of cases to be considered in answering question 2.	FREE FROM RETURN OF THE DISEASE AFTER—							
		Death.	Operated within the past yr.	Intercurrent accidents.	Unknown.	Total.		1 year.	1½ year.	2 years.	3 years.	4 years.	5 years.	6 years.	7 years.
LEOPOLD. Personal communication ----	42	3	11	2	2	18	24	16	9	5	2				
HOFMEIER. (Schröder.) Zeitsch. f. Geb. u Gyn. XIII.	46	12	----	----	1	----	33	20	10 1 relapse. 4 ?	7 6 relapse. 2 ?	4 1 relapse. 1 ? 1 nephritis	0 3 ? 1 apoplexy			
FRITSCH. Arch. of Gyn., XXIX.	60	7	----	----	----	----	20	17	----------	7	2				
A. MARTIN. Berl. Kl. Woch., No. 5, 1881.	66	11	11	----	----	22	44	35 2 R. 1 ?	32 6 ? 1 phthisis.	25 4 ? 1 phthisis	20 1 R.	5	3	2	

TABLE II.—Continued.

Out of my 44 total extirpation cases, relapsed in the first year 9; of the remaining 35 there have been operated:

In 1880, 3—	Of these	there are living	(1886) after 6 years, 1;	relapsed, 1;	death from other causes, 1.	
In 1881, 3—	Do.		(1886) do. 1			
	Do.		(1885) after 5 years, 1			
	Do.		after 4 years, 1			
In 1882, 8—	Do.		(1886) after 4 years, 2			
	Do.		after 3½ years, 2;	do. 1		
	Do.		after 3 years, 2			
	Do.		after 2½ years, ----------		do. 1	
In 1883, 5—	Do.		(1886) after 3½ years, 2			
	Do.		after 3 years, 3			
In 1884, 8—	Do.		(1886) after 3 years, 4			
	Do.		after 2½ years, 1			
	Do.		(1885) after 2 years, 3			
In 1885, 8—	Do.		(1886) after 1½ years, 6;	do. 1		
	Do.		after 1 year, 1			

These results, shown in Table II, prove that the permanent results of the vaginal total extirpation, in this relatively short period of observation, are, no doubt, equal to the best results of carcinoma operations of other organs.

Compare Table III for the results of the author.

TABLE III.—*Exterpatio uteri vaginalis in healthy tissues, without reckoning the deaths caused by the operation.*

Year of the operation.	Epithelioma Portionis vag.			Carcinoma Colli.			Carcinoma Corporis.		
	No. of cases.	There are of these—		No. of cases.	There are of these—		No. of cases.	There are of these—	
		Healthy.	Relapsed.		Healthy.	Relapsed.		Healthy.	Relapsed.
1880				2	1[1]	1	1	1	
1881				6	2	4	1	1	
1882				6	2[2]	4	5	4	1[3]
1883				2	2		3	3	
1884	2	2		4	4		2	2	
1885	1		1	8	6	2	1	1	
End of year 1885	3	2	1	28	17	11	13	12	1
1886	1		1	7		1	1		
1887	1			1					

(1) Died after $1\frac{3}{4}$ years from phthisis pulmonum.
(2) Died after $3\frac{1}{2}$ years from phthisis pulmonum.
(3) Died after 4 years from carcinoma ovarii, with a healthy scar in the roof of the vagina.

Up to end of 1885, operated, 44
Of these relapsed, 13 = 29.7 %

Recovered, 31 = 70.3 %

Is there any other method of treating cancer which, with so small a mortality, can show equally good results? There is no other method for treating cancer of the fundus, and those forms of diseases of the cervix in which the mucous lining of the cervical canal is the point of origin, or in which there are carcinomatous nodules in the tissues of the neck. There is no room for discussion, except in cases of epithelioma of the portio vaginalis, arising from the surface of the cervix—that is, from a surface covered with flat epithelium and containing very few glands.

This form, according to Ruge and Veit and Schröder and Hofmeier has a character essentially less malignant than the above-mentioned forms of carcinoma of the neck. According to Hofmeier the high excision for epithelioma of the cervix has shown a mortality connected with the operation of 7.4 per cent. and a recovery of 53 per cent. for the first year and 33 per cent. after four years.

That relapses are not prevented by this operation is expressly stated in Hofmeier's communication, and, therefore, it cannot be maintained that high excision is a safe means for treating this form of epithelioma of the cervix. My own experience in twenty-eight cases of high excision shows that six died under the influence of the operation, but all of the survivors relapsed in a short time; only a few lived to the end of the second year.

I agree with Fritsch that the observation of cases of progress of the disease in isolated nodules in the mucuous membrane up to the fundus, in cases of carcinoma colli, as Binswanger and P. Ruge have described in very well-marked cases, is sufficient in itself to show that it is erroneous to claim that in cases of carcinoma of the cervix we should try to save the body of the uterus.

The possibility of a subsequent pregnancy is not excluded in cases of bigh excision; but Hofmeier himself has declared that pregnancy is a very serious danger in cases of carcinoma. Therefore, I am convinced that it is much better to immediately perform vaginal total extirpation in these forms of

epithelioma of the cervix. The sooner we operate the more surely we may hope to save our patients from the sad fate of death from cancer; the earlier we operate the better are the chances in reference to the general state of heath of the patient in regard to recovery from the operation. The greater the experience with vaginal total extirpations the more has the *rule* been proved *that we shall perform the operation only when the vicinity of the uterus is entirely free from carcinomatous infiltration.* All attempts to enlarge the boundaries of the operation in this direction have failed. The operation becomes very much more difficult through such infiltration, the danger of the operation increases, and there can be no hope of permanent cure. The majority of operators, so far as I can learn, have concluded, as I have, not to expose these cases to any attempt at a radical operation.

If the carcinoma appears in the form of a solid infiltration of the ligaments and of the walls of the vagina, then the diagnosis and the decision present no difficulties. The progress of the disease by means of the lymphatics is often impossible to discover before the opening of the roof of the vagina. Such cases, then, are not dangerous, so far as the operation itself is concerned, but hopeless in respect to permanent cure. They ought to be put in a separate column in summing up the permanent results of the operation.

Cicatrices on account of former inflammations in the floor of the pelvis may make the procedure extremely difficult and aggravate the prognosis through the shock of the operation, which is often very serious. At any rate one should only venture to operate on such cases if there is a very strong indication for interference and a reasonably great experience on the part of the surgeon.

The technique of the operation itself has undergone only immaterial changes, as is shown by the results of different operators using various methods. It is irrelevant whether the uterus should be removed by an incision made in front of, at the side of, or behind the neck. It is of little importance whether hemorrhage be prevented by stitches introduced

before the incision, according to my method, or whether each separate vessel be seized and tied as it bleeds. It is immaterial whether the uterus be turned over or removed by drawing it down and freeing it, whether the opening in the floor of the pelvis remain open or be closed or be drained either with the iodoform gauze or with a tube.

If it be easily practicable I advise that the ovaries and tubes be also removed. At all events, bleeding must be entirely stopped; during convalescence the parts must, as much as possible, be kept at rest. Washing out the peritoneal cavity does not work favorably. However the opening in the floor of the pelvis is treated, a smooth scar is finally formed into which the roof of the vagina curves upward. If the patients do not become septic, or get any other complication, they make an extraordinarily easy recovery. They recover their color and strength, and after the symptoms of the sudden change of life have been overcome, they seem to enjoy life fully. There is no observation showing that after removal of the uterus, with or without the tubes and ovaries, the patients lose their sexual feelings or their peculiar feminine form.

I recommend the vaginal extirpation of the uterus as the operation, as the means which we ought to apply, in cases of cancerous diseases of the uterus, as long as the disease is limited to the uterus itself.